UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,839	02/25/2004	Parviz Taycbati	TAYE-0509	2957

7590 08/24/2006

Pandiscio & Pandiscio
470 Totten Pond Road
Waltham, MA 02451

EXAMINER
VAN ROY, TOD THOMAS

ART UNIT	PAPER NUMBER
2828	

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,839	TAYEBATI ET AL.	
	Examiner Tod T. Van Roy	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The examiner acknowledges the cancellation of claims 1-7 and the addition of claims 8-16.

Response to Arguments

Applicant's arguments with respect to claims 8-16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8-11, and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Frankel et al. (US 2003/0193974).

With respect to claim 8, Frankel discloses a system for generating light at a variety of wavelengths and directing the same along a common axis, comprising: a plurality of tunable lasers ([0008]), each of the tunable lasers having a different base wavelength and being tunable therefrom (fig.4, [0033]), and each of the tunable lasers being spatially offset from on another (fig.2), a grating for receiving the light from each of the spatially offset tunable lasers (fig.2 #24) and directing the same along a common

axis (fig.2 common beam axis towards fiber #18), wherein the grating is configured so that when each of the spatially offset tunable lasers is radiating at its base wavelength, the grating redirects the light from each of the spatially offset tunable lasers along the common axis (shown in fig.2), a first thermo-optic prism ([0023]) for steering the light from each of the spatially offset tunable lasers (directs light from lasers to grating, and from grating towards the fiber) so that when the spatially offset tunable lasers are tuned so as to generate light at an adjusted wavelength which is different from its base wavelength, the first thermo-optic prism will direct the light from each of the spatially offset tunable lasers into the grating at an angle which compensates for the difference between the adjusted wavelength and the base wavelength ([0023], prism is tuned, which would adjust the refractive index and steer the beams appropriately, also, the device is designed to direct all wavelengths into the fiber, so the steering must be present for the invention to function) so that the light from that laser will emerge from the grating along the common axis (shown in fig.2), and a second thermo-optic prism (fig.2 #26, [0024], etalon being a transparent plate, taught to be tunable) for correcting an aberration introduced by the first thermo-optic prism in order to restore the quality of the light from each of the spatially offset tunable lasers ([0024], corrects for wavelength stabilization and improves the quality of the linewidth).

With respect to claim 9, Frankel discloses a collimating lens positioned after the plurality of tunable lasers and before the first thermo-optic prism (fig.2 #13).

With respect to claim 10, Frankel discloses a focus lens positioned after the grating (fig.2 #16).

With respect to claim 11, Frankel discloses an optical fiber for receiving the light from the grating (fig.2 #18).

With respect to claim 13, Frankel discloses the first thermo-optic prism is positioned between the plurality of tunable lasers and the grating, and the second thermo-optic prism is positioned after the grating (fig.2).

With respect to claims 14-15, Frankel discloses the first thermo-optic prism further comprises adjustment means for adjusting the temperature of the first thermo-optic prism so as to adjustably steer the optical beam ([0026]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frankel.

With respect to claim 12, Frankel teaches the system outlined in the rejection to claim 1 above, but does not teach both thermo-optic prisms to be located before the grating. It would have been obvious to one of ordinary skill in the art to place both prisms prior to the grating as a matter of engineering design choice, not affecting the overall operation of the system (see MPEP – 2144.04 IV C – Rearrangement of Parts).

With respect to claim 16, Frankel teaches the system outlined in the rejection to claim 1 above, including the use of a plurality of diode lasers. Frankel does not teach the use of 12 lasers. It would have been obvious to one of ordinary skill in the art at the time of the invention to choose an appropriate number of diodes, 12 or otherwise, in order to fit the desired power/WDM requirements of the system.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod T. Van Roy whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TVR

MINSUN OH HARVEY
PRIMARY EXAMINER